

Comparisons of Job Characteristics

Focus Occupation: [Structural Iron and Steel Workers \(47-2221\)](#)

Associated Occupation: [Welders, Cutters, Solderers, and Brazers \(51-4121\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Structural Iron and Steel Workers (47-2221)

Associated Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mechanical	6.8	9.5	13.5	>> Current knowledge level is likely more than sufficient
Engineering and Technology	5.7	6.4	11.5	>> Current knowledge level is likely more than sufficient
Design	5.2	6.0	11.2	>> Current knowledge level is likely more than sufficient
Building and Construction	4.0	4.9	18.3	>> Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 80

Focus Occupation: Structural Iron and Steel Workers (47-2221)

Associated Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Quality Control Analysis	5.9	7.4	8.3	> Skill level is likely sufficient
Troubleshooting	4.5	6.2	5.9	0 Current skill level may be sufficient
Equipment Maintenance	3.5	5.9	5.7	0 Current skill level may be sufficient
Repairing	3.4	5.9	6.2	0 Current skill level may be sufficient
Equipment Selection	3.3	5.4	6.1	> Skill level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 57

Focus Occupation: Structural Iron and Steel Workers (47-2221)

Associated Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Arm-Hand Steadiness	6.8	11.4	14.3	>	Current ability level is likely sufficient
Near Vision	11.1	11.2	12.4	>	Current ability level is likely sufficient
Manual Dexterity	6.5	10.3	13.5	>>	Current ability level is likely more than sufficient
Finger Dexterity	7.6	9.7	12.0	>	Current ability level is likely sufficient
Oral Expression	12.4	9.7	8.8	<	Some improvement in abilities may be required
Oral Comprehension	12.5	9.6	9.5	0	Current ability level may be sufficient
Control Precision	6.6	9.5	13.4	>>	Current ability level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 86

Focus Occupation: Structural Iron and Steel Workers (47-2221)

Associated Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)

Work Activities	Exclusivity of Activity
Burn (cut), trim, or scarf metal objects	80
Erect scaffold	56
Fabricate, assemble, or disassemble manufactured products by hand	11
File, sand, grind, or polish metal or plastic objects	82
Identify base metals for welding	68
Identify properties of metals for repair or fabrication activities	71
Maintain welding machines or equipment	70
Move or fit heavy objects	8
Operate hoist, winch, or hydraulic boom	34
Perform safety inspections in industrial, manufacturing or repair setting	32
Read blueprints	10
Read specifications	23
Recognize characteristics of alloys	71
Recognize characteristics of metals	62
Signal directions or warnings to coworkers	42
Use acetylene welding/cutting torch	54
Use arc welding equipment	62
Use combination welding procedures	68
Use hand or power tools	2
Use precision measuring tools or equipment	17

Weld together metal parts, components, or structures
--

54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 82

Focus Occupation: Structural Iron and Steel Workers (47-2221)

Associated Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)

Tools and Technologies	Exclusivity
Aerial lifts	13
Business function specific software	1
Computers	1
Cutting and crimping and punching tools	3
Cutting tools	18
Face and head protection	7
Forming tools	2
Holding and clamping tools	3
Industry specific software	1
Ladders and scaffolding	6
Lifting equipment and accessories	3
Marking tools	11
Measuring and layout tools	3
Personal communication devices	2
Pneumatic tools	8
Power tools	2
Prying and bending tools	10
Respiratory protection	6
Rough and finishing tools	5
Safety apparel	4
Soldering and brazing and welding machinery and supplies	6
Vision protection and accessories	3
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.